Appendix 2

Will the decision/proposal impact…	Impact	If an impact or potential impacts are identified			
		Describe impacts or potential impacts on emissions from the Council and its contractors.	Describe impact or potential impacts on emissions across Rotherham as a whole.	Describe any measures to mitigate emission impacts	Outline any monitoring of emission impacts that will be carried out
Emissions from non-domestic buildings?	Increased emissions	As the main market choice for alternatively fuelled vehicles currently is battery electric, it should be considered that whilst tail pipe emissions and carbon impact through the combustion of fuels are zero, charging infrastructure will need to be increased and there is a residual carbon impact from the electricity supplied. Electricity is generated from a variety of sources, such as wind and solar, gas, coal or biomass power stations, and expansion of nuclear technology. How the electricity is generated and transported via the grid to the plug socket, would be considered as increasing carbon impact in the context of increasing the number of	Overall grid demand from increased use of electricity results in increased borough wide emissions through residual factors such as supply chain impact and source of generation.	The Council has an Energy Team that focus on achieving best solutions for the corporate supply of electricity. Consideration is given to electricity generation methods, supply chain factors and installation of efficient charging solutions.	Electricity usage will be closely monitored, through a process to gather data on individual vehicles charging patterns and consumption. Data will be used to inform future BEV procurement decisions. Monitoring of electricity prices and performance indicators to be established in the context of BEV, to benchmark against internal combustion engine derivatives and emerging new technologies, for example Hydrogen.

		fleet vehicles reliant on electricity.			
Emissions from transport?	Reduced emissions	Vehicles that are converted to battery electric options, will reduce direct emissions of greenhouse gases from transport. Carbon tonnage that is converted from the burning of diesel and petrol, will reduce if replaced with BEV's.	Whilst the Council's vehicle assets emit relatively low carbon tonnage compared to other modes of transportation and industry sectors, any reduction in carbon output will add value to the stipulated environmental improvements associated with net zero targets. The Council has committed in the Climate Strategy for carbon emissions to be at net zero by 2040 across the borough, and a reduction in carbon from the Council's own vehicles is a key contributing factor to this by helping to achieve "A cleaner, greener environment".	A phased approach to fleet replacement, allows work to start immediately to convert the fleet to low carbon alternatives. By tackling fleet replacement in stages, it allows for emerging new technology to be considered, vehicle manufacturing supply chains to stabilise, respond to demand, and price points to reduce as advancements are adopted. Where a BEV is not suitable, a low carbon alternative will be selected such as a hybrid model, or the cleanest possible internal combustion engine, that is compliant with current Clean Air Zone stipulations. Driver training will feature fuel efficient driving, to improve behaviours in sympathy of the vehicle,	All fuel/alternative fuel consumption figures will be monitored, data gathered and analysed for inclusion in future decision making. Impact of delivering driver training will be monitored through reporting available from telematics solutions in conjunction with fuel/alternative fuel data.

				such as harsh acceleration, excessive engine idling (ICE), harsh breaking and over revving.	
Emissions from waste, or the quantity of waste itself?	Both increased and reduced (Context depending)	Batteries of BEV's require specialist disposal at end of life and are significantly larger than on current ICE models. The Council currently must dispose of these through a specialist waste arrangement, which will increase costs and waste of redundant units. . As ICE derivatives are removed from the fleet, oily waste from engine components that are redundant as part of the vehicle maintenance, will reduce.	Waste products from fleet repair and maintenance are managed by an external contractor, and by nature will never fully decompose or be recycled.	Recycling of batteries is a developing industry, with the ambition that precious metals previously minded from the earth's resources, and the associated carbon impact of the manufacturing process, is mitigated by recovery of materials for reuse. By maintaining vehicles in a planned, preventative fashion, it elongates the life cycle, meaning overall there are less vehicles enter the aftermarket. Where a replacement strategy adopts a 3–5 year retention cycle, used vehicles are disposed of and replaced with new, when the old vehicle may never be sold on as ICE are phased out with a lack of replacement parts available. The Council looks to retain fleet for a minimum of 5 years to	Monitoring of non-recyclable waste from the vehicle maintenance process to be established to ascertain carbon impact.

				ensure minimal waste enters the aftermarket.	
Emissions from housing and domestic buildings?	Potential increased emissions	As the Council moves to the employment of BEV, this presents charging infrastructure challenges. Not all fleet vehicles are based at one of the RMBC operating centres, such as Hellaby Depot, Oaks Lane, Barbers Avenue or Riverside. Some vehicles are based from the home addresses of RMBC employees, and never visit an RMBC site. It will be necessary to consider that emissions will be increased from housing/domestic buildings if the need arises to implement a 'Home charging Policy'.	Employees based in the borough, who are required to charge a fleet vehicle at home, will impact on borough emissions.	RMBC energy team to ensure usage for fleet vehicle purposes and associated carbon impact are as efficient as possible.	Reporting to monitor energy usage by vehicle, and vehicle mileages to inform future decision making and draw comparisons with ICE and emerging alternative fuels.
Emissions from construction and/or development?	Increased emissions	As the demand for BEV grows and is implemented, so will the requirement for charging point installation. This will potentially require, depending on the location, some building work that may involve construction activities that	Charging points may be required borough wide, based on the parking location and therefore charging requirement of BEV's added to the fleet and therefore similar construction/installation activities will account for	Installation of charging points will be by external contractor, through which the procurement process considers the carbon impact statements of suppliers submitting bids for the work.	Procurement decisions to account for carbon impact, and be noted as part of the overall carbon footprint calculations of fleet operation.

		have a carbon impact. An example of this, would be excavation work at Hellaby, to lay cables and replace the surface. Supply of Asphalt/concrete or other surfacing materials have supply chains with associated carbon impacts.	increased carbon emissions.		
Carbon capture (e.g. through trees)?	Unknown impact				

Identify any emission impacts associated with this decision that have not been covered by the above fields:

Carbon miles of component parts

Parts supply for routine repair and maintenance may be manufactured around the globe, and therefore consideration needs to be considered as the market evolves, as to if this is greater or less than current ICE parts manufacturers.

Please provide a summary of all impacts and mitigation/monitoring measures:

All the carbon impacts above, rely on the implementation of control measures and new reporting, and it is this in particular that will allow future decision making to be better informed based on the capture of data from this first phase of fleet replacement.

Transition to low carbon alternatives as a UK wide strategy is in relative infancy, and the market has evolved rapidly in 2021 compared to the previous 5 years, with more BEV's registered in one year alone. There are still elements of the unknown, such as vehicle manufacturing, optimum life cycle, full life cycle costs, vehicle component availability, residual values, rising energy prices, other emerging alternative fuels, global supply chain sustainability and resilience, economic factors, infrastructure expansion and all of the associated residual carbon impacts.

By way of mitigation, the phased approach to fleet replacement, and the employment of low carbon alternatives (19% of fleet by 2025) gives opportunity to learn from the gradual implementation and gather data to inform future decision making whilst still progressing towards strategic climate objectives.

Supporting information:	
Completed by: (Name, title, and service area/directorate).	Karen Mudford Head of Fleet & Transport Services Community Safety and Streetscene – Regeneration and Environment
Please outline any research, data, or information used to complete this [form].	
If quantities of emissions are relevant to and have been used in this form please identify which conversion factors have been used to quantify impacts.	
Tracking [to be completed by Policy Support / Climate Champions]	